

## CLAIMS

[c1] A setting process for an intruding object detecting apparatus radiating a radio wave into a detection region to receive a radio wave (a reflection wave) reflected from an object intruding into said detection region and to thereby detect said object, in which

a reflector reflecting a radio wave is placed in a place that is set as said detection region;

a radio wave is radiated from a transmission antenna of said intruding object detecting apparatus;

a reflection wave from said reflector is received by a reception antenna of said intruding object detecting apparatus; and

a position of said reflector calculated based on said reflection wave is stored into storage means of said intruding object detecting apparatus as said detection region.

[c2] A setting process for an intruding object detecting apparatus radiating a radio wave into a detection region to receive a radio wave (a reflection wave) reflected from an object intruding into said detection region and to thereby detect said object, in which

a transmitter transmitting a radio wave is placed in a place that is set as said detection region,

a radio wave from said transmitter is received by a reception antenna of said intruding object detecting apparatus and

a position of said transmitter calculated based on an ratio wave from said transmitter is stored into storage means of said intruding object detecting apparatus as said detection region.

[c3] The setting process for an intruding object detecting apparatus according to claim 2, wherein

said transmitter includes input means,

said transmitter transmits an inputted setting value from said input means,

said intruding object detecting apparatus determines said detection region based on said setting value that said intruding object detecting apparatus receives and said position of said transmitter calculated based on a radio wave from said transmitter and

said detection region is stored into said storage means.

[c4] A setting process for an intruding object detecting apparatus radiating a radio wave into a detection region to receive a radio wave (a reflection wave) reflected from an object intruding into said detection region and to thereby

detect said object, in which

a setting apparatus constituted of a reflector reflecting a radio wave and a transmitter transmitting a radio wave is placed in a place that is set as the detection region,

a radio wave transmitted from said setting apparatus is received by a reception antenna of said intruding object detecting apparatus,

a radio wave is radiated from a transmission antenna of said intruding object detecting apparatus,

a reflection wave from said setting apparatus is received by said reception antenna of said intruding object detecting apparatus and

a position of said setting apparatus calculated based on a radio wave transmitted by said setting apparatus and said reflection wave is stored into storage means of said intruding object detection apparatus as said detection region.

[c5] A confirmation process for setting with an intruding object detecting apparatus radiating a radio wave into a detection region to receive a radio wave (a reflection wave) reflected from an object intruding into said detection region and to thereby detect said object, in which

a reflector reflecting a radio wave is placed in said

detection region,

a radio wave is radiated from a transmission antenna of said intruding object detecting apparatus,

a reflection wave from said reflector is received by a reception antenna of said intruding object detecting apparatus and

collation is performed on a position of said reflector calculated based on said reflection wave and said detection region stored in advance in storage means of said intruding object detecting apparatus,

wherein said intruding object detecting apparatus outputs a detection signal in a case where said position of said reflector is included in said detection region.

[c6] A confirmation process for setting with an intruding object detecting apparatus radiating a radio wave into a detection region to receive a radio wave (a reflection wave) reflected from an object intruding into said detection region and to thereby detect said object, in which

a transmitter transmitting a radio wave is placed in the detection region,

a radio wave is transmitted from said transmitter and

collation is performed on a position of said transmitter calculated based on a radio wave from said transmitter and

said detection region stored in advance in storage means of said intruding object detecting apparatus,

wherein said intruding object detecting apparatus outputs a detection signal in a case where said position of said transmitter is included in said detection region.

[c7] An intruding object detecting apparatus radiating a radio wave into a detection region to receive a radio wave (a reflection wave) reflected from an object intruding into said detection region and to thereby detect said object, comprising:

a transmission antenna radiating a radio wave;

a reception antenna receiving a reflection wave of said radio wave;

scanning means altering directions or directivities of said transmission antenna and said reception antenna;

calculation means calculating a position of said object based on said reflection wave received by said reception antenna and a direction thereof obtained by said scanning means;

storage means storing said detection region set in advance by a reflector or a transmitter, or a setting apparatus constituted of said reflector and said transmitter; and

collation means collating said position of said object specified by said calculation means and said detection region

stored in said storage means.

[c8] A reflector setting or confirming setting of a detection region of an intruding object detecting apparatus radiating a radio wave into said detection region to receive a radio wave (a reflection wave) reflected from said object intruding into said detection region and to thereby detect said object, and

reflecting a radio wave radiated from a transmission antenna of said intruding object detecting apparatus in an almost incident direction of said radio wave with an opposite sign.

[c9] A transmitter setting or confirming setting of a detection region of an intruding object detecting apparatus radiating a radio wave into said detection region to receive a radio wave (a reflection wave) reflected from an object intruding into said detection region and to thereby detect said object, and

transmitting a radio wave having a frequency capable of being received by a reception antenna of said intruding object detecting apparatus.

[c10] The transmitter according to claim 9, comprising input means, and transmitting a setting value inputted from said input means thereto.

[c11] A setting apparatus setting or confirming setting of a detection region of an intruding object detecting apparatus radiating a radio wave into said detection region to receive a radio wave (a reflection wave) reflected from an object intruding into said detection region and to thereby detect said object, comprising:

a reflector reflecting a radio wave radiated from a transmission antenna of said intruding object detecting apparatus in an almost incident direction with an opposite sign; and

a transmitter transmitting a radio wave having a frequency capable of being received by a reception antenna of said intruding object detecting apparatus.